

**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPLICANT(S)	Charbel Khawand	CONFIRMATION NO.:	1560
APPLN. NO.:	10/678,976	EXAMINER:	Lin, Kenny S
FILED:	October 3, 2003	GROUP ART UNIT:	2152
DOCKET NO.	CE11191JI210		
TITLE:	INTERPROCESSOR COMMUNICATION PROTOCOL PROVIDING INTELLIGENT TARGETING OF NODES		
Confirmation No.	1560		

CERTIFICATE UNDER 37 CFR 1.8(a)	
I hereby certify that this correspondence is being electronically transmitted on the date listed below:	
Date:	March 14, 2007
Signature	/Larry G. Brown/
Typed or printed name:	Larry G. Brown

TRANSMITTAL LETTER FOR AMENDED BRIEF ON APPEAL

Mail Stop: **APPEAL BRIEF-PATENTS**
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed please find one copy of an Amended Appeal Brief filed on behalf of the applicants in the matter of the above entitled application. This Amended Brief is filed pursuant to 37 CFR § 41.37(d) in furtherance of the Notice of Appeal filed on November 8, 2006.

The Commissioner is authorized to charge any requisite fees for filing the enclosed Amended Brief and a two-months Extension of Time fee to Motorola, Inc., Deposit Account No. 502117. Any overpayment should be credit to the same Deposit Account.

Respectfully submitted,

Date: March 14, 2007

SEND CORRESPONDENCE TO:

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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AMENDED APPEAL BRIEF

Mail Stop: **APPEAL BRIEF-PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Dear Chief Administrative Patent Judge:

This Amended Appeal Brief is in response to the Notification of Non-Compliant Brief of December 20, 2006 and is in furtherance of Applicants' Notice of Appeal filed on November 8, 2006.

The Commissioner is hereby authorized to charge any requisite fees for filing the enclosed Amended Brief and a two-months Extension of Time to Motorola, Inc., Deposit Account No. 502117. Any overpayment should be credit to the same Deposit Account.

I. REAL PARTY IN INTEREST

The real party of interest is Motorola, Inc., a Delaware corporation.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

This is an appeal from the final rejection of claims 1-21 of the above-referenced application.

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are a total of 21 claims in the application.

B. STATUS OF ALL THE CLAIMS

1. Claims allowed: none
2. Claims objected to: none
3. Claims rejected: 1-21

C. CLAIMS ON APPEAL

The claims on appeal are 1-21. It is important to note, however, that Applicants are not contesting the Examiner's rejections of claims 9 and 17-21 under 35 U.S.C. 112, second paragraph.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Although specification citations are inserted below in accordance with C.F.R. 41.37, these reference numerals and citations are merely examples of where support may be

found in the specification for the terms used in this section of the brief. There is no intention to in any way suggest that the terms of the claims are limited to the examples in the specification. Although, as demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law, it is improper under the law to read limitations from the specification into the claims. Pointing out specification support for the claim terminology, as is done here to comply with rule 41.37, does not in any way limit the scope of the claims to those examples from which they find support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification. In short, the reference numerals and specification citations are not to be construed as claim limitations or in any way used to limit the scope of the claims.

The claimed subject matter of independent claim 1 pertains to an interprocessor communication (IPC) network (100) that includes an IPC server (108) and one or more IPC clients (102-106) coupled to the IPC server (108), one of which is a requesting IPC client (102-106) (see FIGs. 1 and page 23, lines 8-10). In addition, the IPC server (108) includes an operational state table (2000) of the one or more IPC clients (102-106) (see FIG. 20 and page 24, lines 3-6). Upon receiving a service request from the requesting IPC client (102-106), the IPC server (108) determines which from amongst the one or more IPC clients (102-106) is best suited to handle the service request (see page 23, lines 10-21 and page 24, line 22 to page 25, line 4). The requesting IPC client (102-106) determines whether to use the one or more IPC clients (102-106) recommended by the IPC server (108) (see page 21, line 20 to page 22, line 5).

The claimed subject matter of independent claim 10 is directed to a method for providing intelligent targeting of nodes (102-106) in an IPC network (100) having one or

more nodes (102-106) (see FIGs. 1 and 19). The method can include the steps of receiving from one of the nodes (102-106) a service request at the IPC server (108) and determining which of the one or more nodes (102-106) can handle the service request (see steps 1902 and 1904 of FIG. 19 and page 23, lines 8-13). The method can also include the step of selecting from one or more nodes (102-106) that have been determined to be able to handle the service request the best one to handle the service request using an operational state table (2000) located within the IPC server (108) (see step 1906 of FIG. 19; FIG. 20; and page 23, lines 13-21). The requesting node (102-106) determines whether to use the node (102-106) that was selected using the operational state table (2000) (see page 21, line 20 to page 22, line 5).

The claimed subject matter of independent claim 17 is directed to an IPC network (2100) having an IPC server (2100) and one or more clients (2102-2106) coupled to the IPC server (2100) (see FIG. 21 and page 25, lines 12-14). One of the one or more clients (2102-2106) has at least one client (2108, 2110) coupled to the client (2102-2106) as a sub-client (2108, 2110) (see FIG. 21 and page 25, lines 14-15). The IPC server (2100) includes an operational state table (2000) that keeps track of the operational state of the one or more clients (2102-2106), and the IPC server (2100) provides the operational state table (2000) to the client (2102-2106) that has at least one sub-client (2108, 2110) coupled to the client (2102-2106) (see FIG. 21 and page 25, lines 15-23).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 and 10-16 are patentable under 35 U.S.C. 103(a) over U.S. Patent Application Publication No. 2003/0120782 to Bortoloso, et al. (Bortoloso) in view of U.S. Patent Application Publication No. 2004/0205767 to Partanen (Partanen) and further in view of U.S. Patent Application Publication No. 2002/0049842 to Huetsch, et al. (Huetsch).

Whether claims 2-8 are patentable under 35 U.S.C. 103(a) over Bortoloso, Partanen, Huetsch and further in view of U.S. Patent Application Publication No. 2005/0044162 to Liang, et al. (Liang).

Whether claims 17-21 are patentable under 35 U.S.C. 103(a) over Bortoloso in view of Partanen and further in view of U.S. Patent No. 5,224,100 to Lee, et al. (Lee).

Whether claim 9 is patentable under 35 U.S.C. 103(a) over Bortoloso, Partanen, Huetsch and Liang and further in view of Lee.

VII. ARGUMENT

A. The recitations of Bortoloso, Partanen and Huetsch do not render the invention of claims 1 and 10-16 unpatentable.

(1) Claims 1, 10-13, 15 and 16

A brief summary of the Bortoloso, Partanen and Huetsch references may be helpful. Bortoloso describes a client application (20) and a server application (21), each having dedicated inter-network service modules (22, 23) (see paragraph 0031). As correctly noted by the Examiner, Bortoloso does not teach the IPC server including an operational state table that keeps track of the operational state of the one or more IPC clients (see paragraph 8, page 3 of the Final Office Action of June 9, 2006). The Examiner also concluded that Bortoloso does not describe the IPC server as determining which from amongst the one or more IPC clients is best suited to handle a service request upon receipt of a service from the requesting IPC client and the requesting IPC client determining whether to use the one or more IPC clients recommended by the IPC server (see paragraph 8, page 3 of the Final Office Action of June 9, 2006).

Partanen describes a cluster of processing nodes (1, 2, 3) and a load balancer function that allocates tasks to the processing nodes (1, 2, 3) according to predefined rules

(see FIG. 4 and paragraph 0003). The load balancer function divides the external load coming to the cluster of processing nodes (1, 2, 3) in which a certain proportion of the external load is given to a particular node (see FIG. 4 and paragraphs 0003 and 0020). The Examiner concluded that Partanen does not teach the process of the requesting IPC client determining whether to use the one or more IPC clients recommended by the IPC server (see paragraph 8, page 4 the Final Office Action of June 9, 2006).

Huetsch shows a load balancing system having a client (10) and a load balancer (12) for balancing for balancing a processing load in a network in which the processing load is generated by a plurality of clients (10) (see paragraph 0032). The system includes three processing servers (22, 24, 26) for servicing requests from the client (10) (see FIG. 3 and paragraph 0032). In addition, the load balancer (12) includes a selection program (60) for selecting at least one of the processing servers (22, 24, 26) in response to a request from the client (10) (see FIG. 3 and paragraph 0036).

Independent claim 1 recites the feature of the requesting IPC client determining whether to use the one or more IPC clients recommended by the IPC server. Independent claim 10 recites similar subject matter. The Examiner agrees that this subject matter is not taught by the Bortoloso and Partanen references. Applicants, however, submit that Huetsch does not teach such a concept. In particular, the selection program (60) of the load balancer (12) selects at least one of the processing servers (22, 24, 26) in response to a client request, and Huetsch never mentions anything about the client (10) playing a role in determining which processing server (22, 24, 26) to use. In other words, Huetsch is no different from Partanen in this aspect, which the Examiner has clearly indicated does not read on the subject matter in contention here. The scheme of the present invention is far more flexible than what is described in these prior art references, an important characteristic

of an IPC network.

(2) *Claim 14*

Dependent claim 14 recites the subject matter of the IPC server determining whether a node specified by the requesting node cannot presently perform the requested service and the IPC server checking the operational state table periodically until the specified node is available to perform the service, at which point the IPC server informs the requesting node that the requested node is available to perform the service. Partanen does describe using a load share value as an indication of a possible problem in the node, in the configuration of software executing on the node or in the load balancing function itself (see paragraph 0046). Huetsch teaches that after the load balancer (12) selects an appropriate processing server (26), the load balancer (12) establishes a communication link (302) between the client (10) and the processing server (26) through load balancer (12) (see paragraph 0043).

Applicants submit that the proposed combination of Partanen and Huetsch does not read on the subject matter of claim 14 recited above. In particular, neither reference describes a client requesting a specific node. The process described in Partanen to which the Examiner is referring (see paragraph 0046) merely explains that a load share value can be used in a trouble-shooting process and has nothing to do with monitoring a request from a client for a specific node to determine if the requested node is available to perform the requested service. Huetsch simply describes the process of establishing a link between a client and a processing server via a load balancer and never mentions anything about the active involvement of the client, i.e., all decisions are handled by the load balancer (12).

B. The recitations of Bortoloso, Partanen, Huetsch and Liang do not render the invention of claims 2-8 unpatentable.

(1) *Claims 2-4 and 6-8*

As noted above in Section A(1), Bortoloso, Partanen and Huetsch do not teach the requesting IPC client determining whether to use the one or more IPC clients recommended by the IPC server. As such, Applicants submit that claims 2-4 and 6-8 are patentable over these references.

(2) *Claim 5*

The subject matter recited in dependent claim 5 is similar to that in dependent claim 14. As explained in Section A(2), Partanen and Huetsch simply do not teach the concept of an IPC client requesting a specific node to handle a service request and the IPC monitoring an operational state table to determine when the specifically-requested node can handle the service request. For this reason, Applicants believe that dependent claim 5 is patentable over the prior art.

C. The recitations of Bortoloso, Partanen and Lee do not render the invention of claims 17-21 unpatentable.

(1) *Claims 17, 19-21*

Independent claim 17 recites the subject matter of the IPC server providing an operational state table to a client that has at least one sub-client coupled to the client. None of the prior art references cited by the Examiner teach this concept.

In the Response to Arguments section of the Final Office Action of June 9, 2006, the Examiner explains that Bortoloso teaches the IPC server and IPC client as both using tables to store client and server information “such as connection state and physical state (pp. 0031-0032) and provid[ing] the tables to the clients and to synchronizing the tables (pp. 0031-0033).”

A careful review of the paragraphs in Bortoloso cited by the Examiner here reveals

that when the client application (20) is initialized, the client application (20) is registered in its dedicated inter-network service module (22) by storing the client port ID in a virtual connection table (24) and storing the physical address of the corresponding connection path in a physical connection table (25) (see paragraphs 0031 and 0032). A similar process is performed for the server application (21) with its dedicated inter-network service module (23) (see paragraph 0033). The motive behind this process is to enable the client application (20) to send requests, such as a question (27), to the server application (21) (see paragraph 0035: "When the question 27 is processed a connection path is determined by accessing the virtual connection table 24 and the physical connection table 25 of the inter network service module 22.").

This mere enablement of permitting the server application (21) to process requests from the client application (20) has nothing to do with the transfer of an operational state table from an IPC server to an IPC client. Moreover, there is simply no motivation, suggestion or teaching in Bortoloso or Partanen that would lead one of skill in the art to use the load share values of Partanen as part of the initialization of the client application (20) of Bortoloso. In fact, Bortoloso teaches away from such a combination in view of its use of dedicated inter-network service modules, as such components indicate that the client applications (20) will only communicate with the server application (21) and not with another client application (20). The ability of IPC clients in the present invention to readily communicate with one another is one reason why the operational state table can be provided from the IPC server to an IPC client.

(2) *Claim 18*

Dependent claim 18 recites the feature of the client that has the operational state table determining which client can handle a service request if one of the sub-clients sends a

service request message. In view of the discussion in section C(1), Applicants contend that none of the prior art references, either individually or in combination with one another, teach the IPC server providing the operational state table to the client that has a sub-client coupled to the client. Regarding the subject matter of claim 18, Applicants point out that the client application (20) of Bortoloso is never described as taking an active role in any decision-making process. The client application (20) merely provides service requests to the server application (21). Thus, Applicants submit that there is no suggestion or motivation for combining the load balancing function of Partanen with the client and server application configuration of Bortoloso and as such, that claim 18 is patentable over the prior art.

D. The recitations of Bortoloso, Partanen, Huetsch, Liang and Lee do not render the invention of claim 9 unpatentable.

Dependent claim 9 recites the feature of the IPC server sending the operational state table to the IPC client that has a sub-client coupled to the IPC client. As discussed in section C(1), Applicants believe that the cited prior art references, either individually or in combination with one another, teach such subject matter. As the subject matter here in claim 9 is similar, Applicants contend that the prior art references do not read on claim 9.

Conclusion

Because every element of the claimed invention is not disclosed by the cited prior art references, either individually or in combination with one another, Applicants submit that the claims on appeal are patentable.

For the reasons set forth above, and as is apparent from a review of the above-cited references, the claims on appeal present patentable subject matter such that reversal of the rejection is appropriate.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (previously presented) An Interprocessor Communication (IPC) network,
comprising:
an IPC server;
one or more IPC clients coupled to the IPC server, one of which is a requesting
IPC client; and
the IPC server includes an operational state table which keeps track of the
operational state of the one or more IPC clients, the IPC server upon receiving a
service request from the requesting IPC client determines which from amongst
the one or more IPC clients is best suited to handle the service request and the
requesting IPC client determines whether to use the one or more IPC clients
recommended by the IPC server.
2. (original) An IPC network as defined in claim 1, wherein the service request
includes an opcode which informs the IPC server what service is being
requested.
3. (original) An IPC network as defined in claim 2, wherein the IPC server upon
receiving the opcode determines which from amongst the one or more IPC clients
is capable of supporting the requested service.
4. (original) An IPC network as defined in claim 3, wherein the one or more clients
send messages to the IPC server that are used by the IPC server to update the
operational state table.

5. (previously presented) An IPC network as defined in claim 4, wherein the requesting IPC client can request a specific node to handle the service request and the IPC server will monitor the operational state table in order to determine when the specific node is available to handle the service request.
6. (original) An IPC network as defined in claim 4, wherein the IPC network is located within a radio communication device.
7. (original) An IPC network as defined in claim 4, wherein the messages sent by the one or more clients to the IPC server are sent periodically.
8. (original) An IPC network as defined in claim 4, wherein the messages sent by the one or more clients to the IPC server are sent after each of the one or more clients reaches a certain operational usage threshold level.
9. (previously presented) An IPC network as defined in claim 4, wherein at least one of the one or more IPC clients has sub-clients coupled to the IPC client and the IPC server sends the operational state table to the IPC client.
10. (previously presented) A method for providing intelligent targeting of nodes in an interprocessor communications (IPC) network having one or more nodes and an IPC server coupled to the one or more nodes, comprising the steps of:
 - (a) receiving from one of the nodes a service request at the IPC server;

(b) determining which of the one or more nodes can handle the service request;

(c) selecting from the one or more nodes that have been determined to be able to handle the service request in step (b) the best one to handle the service request using an operational state table located within the IPC server, wherein the requesting node determines whether to use the node that was selected using the operational state table.

11. (previously presented) A method as defined in claim 10, further comprising:

(d) sending a message to the requesting node informing it which node will handle the service request.

12. (original) A method as defined in claim 10, wherein the operational table includes information regarding the current operational state of each of the one or more nodes, and the IPC server determines based on the operational state information which of the one or more nodes is best suited to perform the service being requested by the service request.

13. (previously presented) A method as defined in claim 10, wherein the requesting node sending the service request of step (a) can specify which of the one or more nodes it wants to have perform the service, and the IPC server can determine if the specified node is currently available to handle the service request.

14. (previously presented) A method as defined in claim 13, wherein if the IPC server determines that the node specified by the requesting node can not presently perform the requested service, the IPC server will check the operational state table periodically until the specified node is available to perform the service, at which point the IPC server will send a message to the requesting node informing the requesting node that the requested node is available to perform the requested service.

15. (original) A method as defined in claim 10, wherein the one or more nodes periodically send messages to the IPC server which update the information in the operational state table.

16. (original) A method as defined in claim 10, wherein at least one of the one or more nodes sends a message to the IPC server which updates the information in the operational state table when it reaches a predetermined operational activity threshold level.

17. (previously presented) An Interprocessor Communication (IPC) network,
comprising:
an IPC server;
one or more clients coupled to the IPC server, wherein one of the one or more
clients has at least one client coupled to the client as a sub-client; and
the IPC server includes an operational state table which keeps track of the
operational state of the one or more clients, and the IPC server provides the
operational state table to the client that has at least one sub-client coupled to the
client.
18. (original) An IPC network as defined in claim 17, wherein if one of the at least
one sub-clients sends a service request message, the client that has the
operational state table determines which client can handle the service request.
19. (original) An IPC network as defined in claim 17, wherein the one or more clients
send messages to the IPC servers which are used to update the operational state
table.
20. (original) An IPC network as defined in claim 19, wherein the messages which
are used to update the operational state table are sent periodically to the IPC
server

21. (original) An IPC network as defined in claim 19, wherein the messages which are used to update the operational state table are sent by the one or more clients after each has reached a predetermined activity threshold level.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None